



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2018-0160; Product Identifier 2017-NM-139-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Bombardier, Inc., Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2016-24-03,

which applies to certain Bombardier, Inc., Model DHC-8-400 series airplanes.

AD 2016-24-03 requires repetitive detailed inspections of barrel nuts and cradles, a check of the bolt torque of the preload indicating (PLI) washers, and corrective actions if necessary. Since we issued AD 2016-24-03, the manufacturer has developed a modification that, when incorporated, terminates the repetitive inspections. This proposed AD would require modifying the airplane by installing a sealing disk to a certain location and replacing certain barrel nuts. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45

DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0160; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations

office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2018-0160; Product Identifier 2017-NM-139-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

We issued AD 2016-24-03, Amendment 39-18720 (81 FR 88623, December 8, 2016) (“AD 2016-24-03”), for certain Bombardier, Inc., Model DHC-8-400 series airplanes. AD 2016-24-03 requires repetitive detailed inspections of barrel nuts and

cradles, a check of the bolt torque of the PLI washers, and corrective action if necessary. AD 2016-24-03 resulted from reports of cracked and corroded barrel nuts found at the mid-spar location of the horizontal-stabilizer-to-vertical-stabilizer attachment joint. We issued AD 2016-24-03 to detect and correct cracked and corroded barrel nuts, which could compromise the structural integrity of the vertical-stabilizer attachment joints and lead to loss of control of the airplane.

#### **Actions Since AD 2016-24-03 Was Issued**

Since we issued AD 2016-24-03, Bombardier, Inc. has issued new service information that describes a modification. We have determined that accomplishment of this modification will address the unsafe condition and terminate the repetitive inspections required by AD 2016-24-03. This modification was applied to certain airplanes in production.

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2015-13R1, dated June 26, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Bombardier, Inc., Model DHC-8-400 series airplanes. The MCAI states:

There has been one in-service report of a cracked and corroded barrel nut, part number (P/N) DSC228-12, found at the mid-spar location of the horizontal stabilizer to vertical stabilizer attachment joint. There have also been two other reports of corroded barrel nuts found at mid-spar locations.

Preliminary investigation determined that the cracking is initiated by corrosion. Further investigation confirmed that the corrosion was caused by inadequate cadmium plating

on the barrel nuts. Failure of the barrel nuts could compromise the structural integrity of the joint and could lead to loss of control of the aeroplane.

The original version of this [Canadian] AD was issued to mandate the initial and repetitive inspections of the barrel nuts [and cradles for cracks and corrosion] at each of the horizontal stabilizer to vertical stabilizer attachment joints.

Revision 1 of this [Canadian] AD is issued to terminate the repetitive inspection requirement by requiring the incorporation of a modification to install a sealing disc at the middle spar location of the horizontal stabilizer to vertical stabilizer attachment joint, and the replacement of the DSC228 series barrel nuts with B0203073 series barrel nuts that are more resistant to corrosion. The applicability has been changed to account for the introduction of the modifications in production.

Required actions include a bolt preload check of the PLI washers and applicable corrective actions (retorque of the bolts and replacement of the barrel nut), a detailed inspection of cracked or broken barrel nuts for damaged bores of the fittings, replacement of discrepant barrel nuts (those with signs of structural damaged, corrosion, or cracking, or having a part number other than B0203073 series), adding an aluminum sealing disk to the mid-spar barrel nut bore, and repair of damage and corrosion.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0160.

#### **Explanation of Changes from AD 2016-24-03**

In paragraph (h)(2) of AD 2016-24-03, we stated “... replace the barrel nut accomplish corrective actions in accordance with [methods approved by the FAA, TCCA, or Bombardier’s TCCA Design Approval Organization].” We intended to match the language in the MCAI and allow operators to either replace the discrepant barrel nut

in accordance with the applicable service information or to request an alternative method of compliance (AMOC). In addition, we left “paragraph (h)(2)” out of the credit paragraph in AD 2016-24-03. We have updated the retained requirements in this proposed AD to correct those errors.

#### **Related Service Information under 1 CFR part 51**

Bombardier, Inc. has issued the following service information.

- Bombardier Service Bulletin 84-55-06, dated January 31, 2017. The service information describes procedures for installing an aluminum sealing disk at the mid-spar location of the vertical stabilizer.

- Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017. The service information describes procedures for an inspection for part number and damage of the barrel nuts at the horizontal-to-vertical-stabilizer attachment joints, and replacement of discrepant parts.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **FAA’s Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because

we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

### **Differences Between this Proposed AD and the MCAI or Service Information**

The applicability of Canadian AD CF-2015-13R1, dated June 26, 2017, is limited to Bombardier, Inc., Model DHC-8-400, -401 and -402 airplanes, serial numbers 4001 through 4547. However, the applicability of this proposed AD includes Bombardier, Inc., Model DHC-8-400, -401 and -402 airplanes, serial numbers 4001 and subsequent.

Because the affected barrel nuts are rotatable parts, we have determined that discrepant parts could later be installed on airplanes that were initially delivered with B0203073 series barrel nuts, thereby subjecting those airplanes to the unsafe condition.

### **Costs of Compliance**

We estimate that this proposed AD affects 54 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspections (retained actions from AD 2016-24-03)	8 work-hours X \$85 per hour = \$680	\$0	\$680	\$36,720
Sealing disk installation (new proposed action)	4 work-hours X \$85 per hour = \$340	\$781	\$1,121	\$60,534

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Replacement of DSC228 series barrel nuts (new proposed action)	2 work-hours X \$85 per hour = \$170	\$2,236	\$2,406	\$129,924

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

#### **On-condition costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Replacement (retained action from AD 2016-24-03)	2 work-hours X \$85 per hour = \$170	\$8,881	\$9,051

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

#### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds



necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2016-24-03, Amendment 39-18720 (81 FR 88623, December 8, 2016), and adding the following new AD:

**Bombardier, Inc.:** Docket No. FAA-2018-0160; Product Identifier 2017-NM-139-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2016-24-03, Amendment 39-18720 (81 FR 88623, December 8, 2016) (“AD 2016-24-03”).

#### **(c) Applicability**

This AD applies to Bombardier, Inc., Model DHC-8-400, -401 and -402 airplanes, certificated in any category, serial numbers 4001 and subsequent.

**(d) Subject**

Air Transport Association (ATA) of America Code 55, Stabilizers.

**(e) Reason**

This AD was prompted by reports of cracked and corroded barrel nuts found at the mid-spar location of the horizontal-stabilizer-to-vertical-stabilizer attachment joint, and the issuance of new service information that includes a terminal modification. We are issuing this AD to detect and correct cracked and corroded barrel nuts, which could compromise the structural integrity of the vertical-stabilizer attachment joints and lead to loss of control of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Detailed Inspection of Barrel Nuts for Cracks and Corrosion, with No Changes**

This paragraph restates the requirements of paragraphs (g)(1) and (g)(2) of AD 2016-24-03, with no changes.

(1) For airplanes that have accumulated 5,400 flight hours or more, or have been in service 32 months or more since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, as of January 12, 2017 (the effective date of AD 2016-24-03): Within 600 flight hours or 4 months, whichever occurs first after January 12, 2017, do a detailed visual inspection for signs of cracks and corrosion of the barrel nut and cradle, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016.

(2) For airplanes that have less than 5,400 flight hours, and have been in-service for less than 32 months since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, as of January 12, 2017: Before the accumulation of 6,000 total flight hours or 36 months since the date of issuance of the original certificate of airworthiness or the date of issuance of the original export certificate of airworthiness, whichever occurs first, do a detailed visual inspection of the barrel nut for signs of cracks and corrosion of the barrel nut and cradle, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016.

**(h) Retained Corrective Actions, Detailed Inspection, and Repetitive Inspections, with New Service Information, Reference to Terminating Action, and Reference to Corrective Actions**

This paragraph restates the requirements of paragraph (h) of AD 2016-24-03, with new service information and terminating action. Depending on the findings of any inspection required by paragraphs (g) and (j) of this AD, do the applicable actions in paragraphs (h)(1), (h)(2), (h)(3), and (h)(4) of this AD. Accomplishment of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of this paragraph.

(1) If any barrel nut or cradle is found cracked or broken, before further flight, replace the barrel nut and associated hardware, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017.

(i) Concurrently with the replacement of any barrel nut, do a detailed inspection for corrosion and damage of the bore of the fitting, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017, and, before further flight, repair all corrosion and damage, in accordance with Bombardier Repair Drawing (RD) 8/4-55-1143, Issue 1, dated May 21, 2015. If the bore of the fitting cannot be repaired in accordance with Bombardier RD 8/4-55-1143, Issue 1, dated May 21, 2015, accomplish corrective actions in accordance with the procedures specified in paragraph (q)(2) of this AD.

(ii) Within 600 flight hours or 4 months, whichever occurs first, after the replacement of a cracked barrel nut, replace the remaining barrel nuts and their associated hardware at the horizontal-stabilizer-to-vertical-stabilizer attachment joints, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017.

(2) If any corrosion is found on any barrel nut on the front or rear-spar joints, before further flight, replace the barrel nut in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017, or accomplish corrective actions in accordance with the procedures specified in paragraph (q)(2) of this AD.

(3) If any corrosion above level 1, as defined in Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016, is found on a barrel nut at the mid-

spar joint, before further flight, replace the barrel nut and accomplish corrective actions in accordance with the procedures specified in paragraph (q)(2) of this AD.

(4) If all corrosion found is at level 1 or below, as defined in Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016, on a barrel nut at the mid-spar joint, repeat the inspection specified in paragraph (g) of this AD at intervals not to exceed 600 flight hours or 4 months, whichever occurs first, until completion of the actions required by paragraph (k) of this AD.

**(i) Retained Preload Indicating (PLI) Washer Check, with New Terminating Action**

This paragraph restates the requirements of paragraph (i) of AD 2016-24-03, with new terminating action. For airplanes with PLI washers installed at the front and rear-spar joints, before further flight after accomplishing any inspection required by paragraph (g) of this AD and all applicable corrective actions required by paragraph (h) of this AD, check the bolt preload, and do all applicable corrective actions, in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016. Do all applicable corrective actions before further flight. Accomplishment of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of this paragraph.

**(j) Retained Repetitive Inspection Interval, with New Terminating Action**

This paragraph restates the requirements of paragraph (j) of AD 2016-24-03, with new terminating action. Repeat the inspection and preload check required by paragraphs (g) and (i) of this AD at intervals not to exceed 3,600 flight hours or 18 months, whichever occurs first, except as provided by paragraph (k) of this AD. Accomplishment

of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of this paragraph.

**(k) Retained Optional Barrel Nut Replacement, with New Service Information**

This paragraph restates the provisions of paragraph (k) of AD 2016-24-03, with new service information. Inspection and replacement of all barrel nuts at the horizontal-stabilizer-to-vertical-stabilizer attachment joints, in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017, extends the next inspection required by paragraph (j) of this AD to within 6,000 flight hours or 36 months, whichever occurs first, after accomplishing the replacement.

**(l) New Requirement of this AD: Sealing Disk Installation**

Within 8,000 flight hours or 48 months, whichever occurs first, after the effective date of this AD, install a sealing disk at the mid-spar location of the vertical stabilizer in accordance with paragraph 3.B., “Procedure,” of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-06, dated January 31, 2017. Accomplishment of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of paragraphs (h), (i), and (j) of this AD.

**(m) New Requirement of this AD: Replacement of DSC228 Series Barrel Nuts**

For Bombardier, Inc., Model DHC-8-400, -401 and -402 airplanes, serial numbers 4001 through 4524 inclusive: Within 8,000 flight hours or 48 months, whichever occurs first, after the effective date of this AD, replace all DSC228 series barrel nuts at the horizontal-stabilizer-to-vertical-stabilizer attachment joints with B0203073 series barrel

nuts in accordance with paragraph 3.B., "Procedure," of the Accomplishment Instructions of Bombardier Service Bulletin 84-55-08, Revision A, dated August 2, 2017.

Accomplishment of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of paragraphs (h), (i), and (j) of this AD.

**(n) Parts Installation Prohibition**

After modification of an airplane as required by paragraphs (l) and (m) of this AD, no person may install a DSC228 series barrel nut at the horizontal-stabilizer-to-vertical-stabilizer attachment joint on the modified airplane.

**(o) Terminating Actions**

Accomplishment of the actions required by paragraphs (l) and (m) of this AD, as applicable, terminates the requirements of paragraphs (h), (i), and (j) of this AD.

**(p) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraphs (g)(1), (g)(2), (h)(1), (h)(1)(i), (h)(1)(ii), (h)(2), (h)(3), (h)(4), (i), and (k) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraphs (p)(1)(i) through (p)(1)(iii) of this AD.

(i) Bombardier Alert Service Bulletin A84-55-04, dated May 21, 2015, which is not incorporated by reference in this AD.

(ii) Bombardier Alert Service Bulletin A84-55-04, Revision A, dated June 2, 2015, which is not incorporated by reference in this AD.

(iii) Bombardier Alert Service Bulletin A84-55-04, Revision B, dated July 30, 2015, which is not incorporated by reference in this AD.



(2) This paragraph provides credit for actions required by paragraphs (h)(1), (h)(1)(i), (h)(1)(ii), (h)(2), and (k) of this AD, if those actions were performed before the effective date of this AD using the service information identified in paragraphs (p)(2)(i) and (p)(2)(ii) of this AD.

(i) Bombardier Service Bulletin 84-55-08, dated January 27, 2017, which is not incorporated by reference in this AD.

(ii) Bombardier Alert Service Bulletin A84-55-04, Revision C, dated May 3, 2016, which was incorporated by reference in AD 2016-24-03.

**(q) Other FAA AD Provisions**

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(ii) AMOCs approved previously for AD 2016-24-03 are approved as AMOCs for the corresponding provisions of this AD.

**(2) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

**(r) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA Airworthiness Directive CF-2015-13R1, dated June 26, 2017, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0160.

(2) For more information about this AD, contact Aziz Ahmed, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7329; fax 516-794-5531.

(3) For service information identified in this AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email [thd.qseries@aero.bombardier.com](mailto:thd.qseries@aero.bombardier.com); Internet <http://www.bombardier.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Renton, Washington, on March 2, 2018.

Michael Kaszycki,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

[FR Doc. 2018-04720 Filed: 3/8/2018 8:45 am; Publication Date: 3/9/2018]